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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,259	12/01/2003	Leo W. Spsychalla	10413US01	2950

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EXAMINER

PAPE, ZACHARY

ART UNIT	PAPER NUMBER
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2835

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/725,259	SPYCHALLA, LEO W.	
	Examiner	Art Unit	
	Zachary M. Pape	2835	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 17, 18 and 21-24 is/are rejected.
- 7) ☒ Claim(s) 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

The following detailed action is in response to the correspondence filed 8/16/06.

#### ***Drawings***

The objection to the drawings has been withdrawn in view of the amendment to claim 16

#### ***Claim Objections***

The objection to claim 16 has been withdrawn in view of the amendment to claim 16.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 8, 10-11, 13-14, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Bologna (US 6,084,768).

With respect to claim 1, Bologna teaches a data storage cartridge comprising: a housing (60) defining an interior cavity (Between 92 and 94), an access window (110), and at least one alignment feature (156, 212) positioned within the interior cavity, wherein the housing includes a polymeric material (Column 5, Line 61); a hard drive

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(20) maintained within the interior cavity (As illustrated in Fig 11), the hard drive having at least one electrical connection point (86) wherein the at least one alignment feature (212) is configured to interact with the hard drive to at least partially align the at least one electrical connection point relative to the access window (See Fig 16); and an attachment device (120) separate from the housing and inserted through one of the at least one alignment feature to at least partially secure the hard drive within the housing (Column 7, Lines 8-13).

With respect to claim 2, Bologna further teaches that the hard drive includes at least one alignment feature (78, 80, 82) to mate with the at least one alignment feature (212) of the housing to at least partially align the at least one electrical connection relative to the access window (Column 7, Lines 8-13, see also Fig 16).

With respect to claim 3, Bologna further teaches that the housing defines a Y-direction parallel to a length of the access window, and a X-direction perpendicular to a width of the access window, the at least one alignment feature (156, 212) of the housing configured to align the at least one electrical connection point (68) relative to the access window in at least one of the X-direction and the Y-direction (As illustrated in Fig 16).

With respect to claim 4, Bologna teaches that the at least one alignment feature (156, 212) of the housing including an alignment post (156) configured to align the at least one electrical connection point relative to the access window in the X-direction (See Fig 16).

With respect to claim 8, Bologna further teaches that the at least one alignment feature (212) of the housing (60) includes an alignment rib (See Fig 15) defining a

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substantially planar surface extending in a direction substantially perpendicular to the access window (See Fig 15), the alignment rib being configured to align the at least one electrical connection point relative to the access window in the Y-direction (Via 120a, 122a, 120, etc).

With respect to claim 10, Bologna further teaches that the alignment rib (212) is adjacent the access window (110, see Fig 10).

With respect to claim 11, Bologna further teaches an alignment post (156) configured to align the at least one electrical connection point (86) relative to the access window in the X-direction (Column 6, Lines 3-6, see also Fig 10).

With respect to claim 13, Bologna further teaches a data storage cartridge comprising: a housing (60, which comprises 90, 92, 94, and 96) including a polymeric material (Column 5, Line 61) and a first major and planar member (90) that defines at least three sides of an access window (See Fig 10), the housing defining an interior cavity (See Fig 10) and at least one alignment feature (154, 156, 212) positioned within the interior cavity; and a hard drive (20) maintained within the interior cavity (As illustrated in Fig 16), the hard drive having at least one electrical connection point (86); wherein the at least one alignment feature (156) of the housing is configured to interact with the hard drive to align the at least one electrical connection point (86) relative to the access window in a Z-direction that is perpendicular to the first major and planar member (Column 6, Lines 3-6).

With respect to claim 14, Bologna further teaches that the at least one alignment feature (156) of the housing includes an attachment pillar (Column 6, Lines 3-6)

configured to align the at least one electrical connection point relative to the access window in the Z-direction (As illustrated in Fig 16).

With respect to claim 21, Bologna further teaches that the housing (60) includes a first planar member (90) defining the access window (See Fig 10), and the at least one alignment feature (156) extends from the planar member to interact with the hard drive (20) to position the at least one electrical connection point 86) to be contacted through the access window (See Fig 16).

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bologna in view of Crockett (US 6,061,231).

With respect to claim 5, Bologna teaches the limitations of claim 4 above, but fails to teach the additional limitations of claim 5. Crockett teaches an alignment post (20) which defines a first tier having a first diameter and extending from a first major member of the housing and a second tier having a second diameter and extending from the first tier opposite the first major member of the housing, the first diameter being greater than the second diameter (As illustrated in Fig 1). Crockett teaches the conventionality of an alignment feature of a housing including an alignment post (20)

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configured to align at least one electrical connection point (on 10) relative to an access window (36) in an x-direction (See Fig 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Crockett with that of Bologna to further provide significant resistance to damage in addition to alignment (Column 1, Lines 34-40).

With respect to claim 6, Crockett further teaches that the at least one alignment feature (20) of the housing further includes a second alignment post (20 – see Fig 1 which shows multiple posts) configured to align at least one electrical connection point (Attached to the device 10) relative to an access window (36) in the X-direction (As illustrated in Figs 1, and 3).

With respect to claim 7, Crockett further teaches an electrical device (10) includes a mounting cavity (24) configured to receive the alignment post (See Fig 1).

**Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Astier in view of Grois et al. (US 6,331,079).**

With respect to claim 9, Astier teaches a data storage cartridge comprising: a housing (15) defining an interior cavity (As illustrated in Fig 3), an access window (Defined at least in part by 17-19), at least one alignment feature (23) positioned within the interior of the cavity (As illustrated in Fig 3), and a Y-direction parallel to a length of the access window, the housing including a polymeric material, a hard drive (10) maintained within the interior cavity (Fig 3) the hard drive having at least one electrical connection point (Best described by element 10 in Fig 8). Astier fails to teach at least

one alignment features includes an alignment rib defining a substantially planar surface extending in a direction substantially perpendicular to the access window wherein the hard drive includes an alignment slot configured to receive the alignment rib, the alignment rib being configured to align the at least one electrical connection point relative to the access window in the Y-direction. Grois et al. teaches the conventionality of utilizing a substantially planar alignment rib (48) with a complimentary alignment groove (88b) to align two devices. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Grois et al. with that of Astier to provide a further means of aligning the disk drive (10) with the housing (15) in the Y-direction.

**Claims 12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bologna.**

With respect to claim 12, Bologna teaches the limitations of claim 1 above, but is silent as to the alignment tolerance range, however It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a tolerance range of +/-0.005 inches, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The use of such a value would allow the hard disc to continue to operate without causing disconnection problems while sufficiently maintaining the device within the housing and could be determined by routine experimentation by one of ordinary skill in the art.



With respect to claim 17, Bolognia teaches the limitations of claim 1 above, but is silent as to a specific length and width of the housing. It would have been an obvious matter of design choice to change the width and the length of the housing to be 5 and 6 inches respectively since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

**Claims 18 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolognia in view of Astier.**

With respect to claims 18 and 24, the method steps recited in the claims are inherently necessitated by the device structure as taught by the Bolognia reference but is silent as to, "a data storage cartridge formed of a polymeric material". Astier teaches the conventionality of forming a data storage cartridge (15) of a polymeric material (Column 2, Lines 64-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Astier with that of Bolognia since polymeric materials are both low cost and easy to manufacture thus reducing the cost and assembly time of the housing of Bolognia.

**Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolognia in view of Lu et al. (US 6,317,317).**

With respect to claim 22, Bolognia further teaches that the housing includes a base (90) defining the access window and the at least one alignment feature (See Fig

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10), but fails to teach that the housing includes a cover. Lu et al. teaches the conventionality of covering a hard disk drive housing (Via 10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Lu et al. with that of Bologna to provide additional protection to the hard disk drive of Bologna and to prevent, at least in part, some electromagnetic waves from interfering with the hard disk (Column 1, Lines 46-50).

With respect to claim 23, Bologna further teaches that the base (90) is formed of a single piece (See Figs 10 and 14), and Lu et al. teaches that the cover (10) is formed of a single piece (As illustrated in Fig 1).

### ***Allowable Subject Matter***

3. Claims 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claims 15-16, the allowability resides in the overall structure of the device as recited in dependent claim 15 and at least in part because claim 15 recites, "the attachment pillar defines a passage axially extending through the attachment pillar".

The aforementioned limitations in combination with all remaining limitations of claims 13-15 are believed to render said claim 15 and all claims dependent therefrom (Claim 16) patentable over the art of record.

***Response to Arguments***

4. Applicant's arguments with respect to claims 1-8, 10-14, 15-18, 21-24 have been considered but are moot in view of the new ground(s) of rejection.

5. Applicant's arguments filed 8/16/2006 to claim 9 have been fully considered but they are not persuasive.

With respect to Applicant's remarks to claim 9 that, "there is no suggestion to combine Astier with any other reference to include an alignment rib as recited in claim 9. Rather, any suggestion to combine the cited references comes from the present application, which is impermissible hindsight", the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, in the present case it is well known in the art of alignment, as evidenced by the Grois et al. reference, to use a rib to align to parts or pieces so that a correct fit is made.

In response to Applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In the present case the Examiner respectfully asserts that, as evidenced by the Grois et al. reference, using ribs to align to parts is of ordinary skill in the art (at the time the present invention was made).

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached on Mon. - Thur. & every other Fri. (8:00am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached at 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ZMP

*Lisa Lea Edmonds*  
**LISA LEA-EDMONDS**  
**PRIMARY EXAMINER**